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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,287	11/13/2000	Klaus Gradischnig	SIEM0017U/US	3477

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EXAMINER	
BRUCKART, BENJAMIN R	
ART UNIT	**PAPER NUMBER**
2155	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/700,287	GRADISCHNIG, KLAUS	
	Examiner	Art Unit	
	Benjamin R. Bruckart	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Claims 10-22 are pending in this Office Action.

Claims 10-22 are rejected.

There are no new or amended claims.

Claims 1-9 are cancelled.

Response to Arguments

Applicant's arguments filed in the appeal brief 10/7/2004 have been fully considered and are moot in view of new grounds of rejections and objections. The finality has been withdrawn and prosecution is reopened. See Remarks below.

Drawings

The drawings are objected to because they are not sufficiently detailed in the specification. Applicant recites the use of some of the labels of the figures; A, B, C, D and X; but does not cite the Figures separately in the specification details, thereby making it confusing and difficult to find the functions claimed. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Further more the Drawings 1-3 are deficient as not properly describing the functionality of the claims or specification. Applicant cites the nodes of the figure; A, B, C, D and X; but does not distinguish or distinctly separate the detailed functions from Figures 1, 2, and 3. Applicant does not tag the paths or the directions in which the invention operates.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claim recite the use of 'automatically withholding' a transfer of said signaling messages. The term withholding does not appear in the specification.

The specification has many minor errors as a result of several amendments. Appropriate correction is required.

The examiner requests a new specification the amendments submitted on filing with proper status indicators.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10 and 17 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim limitations "automatically withholding a transfer of said signaling message via a pertinent linkset upon a positive check result outcome of said checking step" and "signaling messages via pertinent linksets are automatically withheld' are not explicitly stated in the specification. The specification does not contain the word 'withholding.' The cited portion of the claim in the brief highlights page 3, lines 13-28, where the steps of breaking out of the loop are described.

Further more the Drawings 1-3 are deficient as not properly describing the functionality of the claims or specification. Applicant cites the nodes of the figure; A, B, C, D and X; but does not distinguish or distinctly separate the detailed functions from Figures 1, 2, and 3. Applicant does not tag the paths or the directions in which the invention operates.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"automatically withholding" is not supported in the specification.

Applicant's invention as claimed:

Claims 10, 11, 16, 17-22 are rejected under 35 U.S.C. 102(a) as being unpatentable over "Isolating Faulty Routing Tables in SS7 Networks: Present and Future" (herein after "IEEE") by Glitho.

Regarding claim 10, a method for signaling in a signaling transfer point (IEEE: page 1; bottom right; Introduction to SS7 Routing Principles), comprising the steps of:

routing signaling messages from source signaling points in a direction toward destination signaling points (IEEE: page 2, second paragraph; page 3, last paragraph; page 4, second paragraph);

checking at least one of a presence of a loop and a possibility of the presence of the loop over a departing link set by at least one of a routing test (IEEE: page 4, para 2-7) and a real time method (IEEE: page 5 (103) last paragraph 'An Assessment'); and

automatically withholding a transfer of said signaling messages via a pertinent linkset upon a positive check results outcome of said checking step (IEEE: page 4, para 2-5 "both messages indicate failure. The test is stopped and no further action is taken).

Regarding claim 11, a method according to claim 10, further comprising the steps of:

sending test messages via a link set to destinations that said linkset can reach upon said positive check result outcome (IEEE: page 4, para 2-7); and

automatically withholding transfer of said signaling messages to a destination that had returning test messages upon return of said test messages (IEEE: page 4, para 2-5 "both messages indicate failure. The test is stopped and no further action is taken).

Regarding claim 16, a method according to claim 10, further comprising the step of:

checking a new current route for absence of loops in the signaling transfer point, immediately after blocking; a linkset in said loop (IEEE: page 4, para 2-7).

Regarding claim 17, a signaling system of a signaling transfer point (IEEE: page 1; bottom right; Introduction to SS7 Routing Principles), comprising:

a checker for detection of at least a loop or a possibility of a presence of said loop over a departing linkset to a destination signaling point (IEEE: page 4, para 2-7), said checker utilizes at least one of a routing test (IEEE: page 4, para 2-7) and a real time method (IEEE: page 5 (103) last paragraph 'An Assessment'), wherein when a positive check result outcome is obtained transfer of signaling messages via pertinent linksets are automatically withheld (IEEE: page 4, para 2-5 "both messages indicate failure. The test is stopped and no further action is taken).

Regarding claim 18, a signaling system according to claim 17, further comprising:

a verifier for detection of said possibility of the presence of said loop (IEEE: page 3, bottom right; The Messages), said verifier sends test messages to destinations reachable via said departing linkset before said signaling system withholds said transfer of signaling messages to a destination for which said test messages return (IEEE: page 3, bottom right... The procedure – page 4, para 7).

Regarding claim 19, the method of claim 10, wherein said checking is by a routing test (IEEE: page 4, para 2-7).

Regarding claim 20, the method of claim 10, wherein said checking is by a real time method (IEEE: page 5 (103) last paragraph 'An Assessment').

Regarding claim 21, the signaling system of claim 17, wherein said checking utilizes a routing test (IEEE: page 4, para 2-7).

Regarding claim 22, the signaling system of claim 17, wherein said checking utilizes a real time method (IEEE: page 3, bottom right... The procedure – page 4, para 7).

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Isolating Faulty Routing Tables in SS7 Networks: Present and Future" (herein after "IEEE") by Glitho in view of U.S. Patent No. 6,044,402 by Jacobson et al.

Regarding claim 12,

The Giltho reference teaches a system of testing routing paths before sending data.

The Glitho reference does not explicitly state the blocking of packets based on destination and port.

The Jacobson reference teaches a method according to claim 10, further comprising the step of withholding transfer of said signaling messages to downstream pertinent destinations by blocking a specific departing link set of said pertinent destination in a routing table of said signaling transfer point (Jacobson: col. 13, lines 20-25; lines 56-59).

The Jacobson reference further teaches the network connection blocker combines routing packets with a blocking module to decrease the number of devices in a network, which can act as bottlenecks and can be vulnerable to attack (Jacobson: col. 2, lines 7-15; col. 1, lines 55-64).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of checking signal transfer source and destination paths for loops before sending data as taught by Glitho while blocking packets based on destination and port as taught by Jacobson to decrease the number of devices in a network which can act as bottlenecks and can be vulnerable to attack (Jacobson: col. 2, lines 7-15; col. 1, lines 55-64).

Claim 13 is rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Glitho and Jacobson et al.

Regarding claim 13, a method according to claim 10, further comprising the step of:

withholding transfer of said signaling messages to upstream pertinent destinations via the pertinent link set by sending transfer prohibiting messages by the signaling transfer point regarding a destination signaling point to a preceding signaling transfer point (Jacobson: col. 13,

lines 20-25; lines 56-59), where upon said preceding signaling transfer point will at least perform one of a functions of rerouting traffic to the destination signaling point and stopping said traffic to the destination signaling point (Jacobson: col. 13, lines 20-25; lines 56-59; col. 3, lines 41-56).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Isolating Faulty Routing Tables in SS7 Networks: Present and Future" (herein after "IEEE") by Glitho in view of U.S. Patent No. 5,014,262 by Harshavardhana.

Regarding claim 14,

The Giltho reference teaches a system of testing routing paths before sending data.

The Glitho reference does not explicitly state the breaking out of a loop but show the steps of breaking a test in IEEE: page 4, para 2-5 ("both messages indicate failure. The test is stopped and no further action is taken).

The Harshavardhana reference teaches a method according to claim 10, further comprising the step of:

controlling an interruption of said loop by an operations maintenance and administration part (Harshavardhana: col. 2, lines 42- 51; col. 12, lines 60-63).

The Harshavardhana reference further teaches breaking out of loops prevents network inefficiencies like the tying up all the virtual circuits available and requiring retransmission, or traveling through too many switching nodes, or causing the network to be unreachable.

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of checking signal transfer source and destination paths for loops before sending data as taught by Glitho while providing a means to break out of loops as taught by Harshavardhana in order to increase network efficiency by avoiding tying up all the virtual

circuits available and requiring retransmission, or traveling through too many switching nodes, or causing the network to be unreachable.

Claim 15 is rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Glitho and Harshavardhana.

Regarding claim 15, a method according to claim 10, further comprising the step of:

controlling an interruption of said loop by a message transfer part (Harshavardhana: col. 2, lines 42- 51; col. 12, lines 7-12; lines 23-24).

REMARKS

Applicant's brief bring up issues that are not properly supported in the specification and therefore create new issues of interpretation. The examiner has added rejections and objections to help clarify these issues and is revising the prior art search.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart
Examiner
Art Unit 2155

brb BRB

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SUPERVISORY PATENT EXAMINER